May 4, 2007

Mr. Jack Davis, Senior Vice President
and Chief Nuclear Officer
Detroit Edison Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI POWER PLANT, UNIT 2, NRC INTEGRATED INSPECTION REPORT 05000341/2007002

Dear Mr. Davis:

On March 31, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Fermi Power Plant, Unit 2. The enclosed report documents the inspection findings which were discussed on April 5, 2007, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, two findings of very low safety significance were identified one of which involved a violation of NRC requirements. However, because this finding was of very low safety significance and because the issue was entered into your corrective program, the NRC is treating the finding as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Fermi 2 facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Christine A. Lipa, Chief
Branch 4
Division of Reactor Projects

Docket No. 50-341
License No. NPF-43

Enclosure: Inspection Report 05000341/2007002
w/Attachment: Supplemental Information

cc w/encl: K. Hlavaty, Plant Manager
R. Gaston, Manager, Nuclear Licensing
D. Pettinari, Legal Department
Michigan Department of Environmental Quality
Waste and Hazardous Materials Division
M. Yudasz, Jr., Director, Monroe County
Emergency Management Division
Supervisor - Electric Operators
State Liaison Officer, State of Michigan
Wayne County Emergency Management Division

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Letter to Jack Davis from Christine A. Lipa dated

SUBJECT: FERMI POWER PLANT, UNIT 2, NRC INTEGRATED INSPECTION REPORT 05000341/2007002

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-341
License No:	NPF-43
Report No:	05000341/2007002
Licensee:	Detroit Edison Company
Facility:	Fermi Power Plant, Unit 2
Location:	Newport, Michigan
Dates:	January 1 through March 31, 2007
Inspectors:	R. Michael Morris, Senior Resident Inspector T. Steadham, Resident Inspector R. Jickling, Senior Emergency Preparedness Analyst D. Jones, Reactor Inspector B. Jose, Reactor Engineer M. Phalen, Health Physicist A. Wilson, Reactor Inspector
Approved by:	C. Lipa, Chief Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000341/2007002; 01/01/2007-03/31/2007; Fermi Power Plant, Unit 2; Radiation Protection and Emergency Preparedness.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional-based emergency preparedness and radiation protection inspectors. Two Green findings, one of which was associated with a Non-Cited Violation, were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)." Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

- Green. The inspectors identified a finding associated with the failure to verify adequate compensatory measures were in place while the Emergency Operations Facility (EOF) was unavailable. The licensee removed the EOF from service for remodeling and planned to use their Alternate EOF (AEOF) for emergency response if required as a compensatory action. However, locks placed on the doors to the AEOF and the lack of continuous staffing of the facility could have delayed activation of the facility. After the issue was identified by the inspector, the licensee took prompt interim corrective actions and entered the issue into their corrective action program.

  This finding was determined to be more than minor because it was similar to an example in IMC 0612, Appendix E, in that the AEOF and the procedures for activating the AEOF were in a condition that could have delayed the licensee's response to an emergency. The finding was of very low safety significance because adequate compensatory measures were put in place within seven days. (Section 4OA3)

Cornerstone: Occupational Radiation Safety

- Green. The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation (NCV) of NRC requirements for the failure to maintain adequate procedures for the calibration of the containment high range area radiation monitors (D11-K816 A and B). Specifically, the licensee had revised its procedures in 2001 to remove the requirement to calibrate the detectors with a radioactive source of known activity. Consequently, the monitor had not been adequately calibrated since April 2000. Following that identification, the licensee performed an evaluation and determined that the monitor was functional based on its adequate response to ambient radiation levels.

The finding was more than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Plant Facilities/Equipment and Instrumentation and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive materials during civilian nuclear reactor operation. Since the finding involved area radiation monitors, the inspectors utilized Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety SDP," to assess its significance. Given that instrument functional response was determined through electronic calibration and a qualitative response to radiation, and since the issue did not involve as-low-as-is-reasonably-achievable planning or work controls, there was no overexposure or substantial potential for an overexposure to the worker, nor was the licensee's ability to assess dose compromised; the inspectors concluded that the SDP assessment for the finding was of very low safety significance (Green). The licensee's planned corrective actions included revising the applicable procedures to perform a full detector calibration utilizing a known source of radiation and including specific acceptance criteria, and clarifying Technical Specifications and the bases. (Section 2OS3.3)

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

On January 6, 2007, Unit 2 reduced power to 68 percent to perform a rod pattern adjustment and returned to full power on January 7, 2007. Unit 2 operated at or near full power throughout the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Barrier Integrity, Mitigating Systems, and Emergency Preparedness

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors reviewed licensee procedures for mitigating the effects of cold weather and high winds in the residual heat removal (RHR) complex and outside doors. The inspectors performed walkdowns and reviewed severe weather procedures, emergency plan implementing procedures related to severe weather, and annunciator response procedures. Additionally, the inspectors reviewed condition assessment resolution documents (CARDs) and verified problems associated with adverse weather were entered into the corrective action program with the appropriate significance characterization.

These activities completed one cold weather systems inspection sample.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignments (71111.04)

.1 Partial System Walkdown (71111.04Q)

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- Torus Hardened Vent performed the week of January 21, 2007;
- Reactor Core Isolation Cooling (RCIC) System performed the week of March 18, 2007; and
- Division II RHR/Residual Heat Removal Service Water performed the weeks of March 11 and March 18, 2007.

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones. The inspectors reviewed operating procedures, system diagrams, Technical Specification (TS) requirements, Administrative TS, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components were aligned correctly.

In addition, the inspectors verified equipment alignment problems were entered into the corrective action program with the appropriate significance characterization.

These activities completed three quarterly partial system walkdown inspection samples.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown (71111.04S)

a. Inspection Scope

The inspectors performed a complete system walkdown of the following risk-significant system:

- Core Spray System performed the week of January 14, 2007.

The inspectors reviewed operating procedures, system diagrams, TS requirements, and applicable sections of the Updated Final Safety Analysis Report (UFSAR) to ensure the correct system lineup. The inspectors verified acceptable material condition of system components, availability of electrical power to system components, and that ancillary equipment or debris did not interfere with system performance. The inspectors walked down accessible portions of the system to verify system components were aligned correctly.

These activities completed one semi-annual complete system walkdown inspection sample.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection tours of the following risk-significant plant areas:

- Division II Control Complex Heating, Ventilation, and Air Conditioning (HVAC) Room performed the week of January 7, 2007;
- Standby Liquid Control Pump Area performed the week of January 14, 2007;
- Torus Room Basement performed the week of January 21, 2007;
- Division I Switchgear Room performed the week of January 28, 2007;
- Reactor Building Component Cooling Water Heat Exchanger Room performed the week of March 25, 2007; and
- Control Room performed the week of March 24, 2007.

The inspectors verified fire zone conditions were consistent with assumptions in the licensee's Fire Hazards Analysis. The inspectors walked down fire detection and suppression equipment, assessed the material condition of fire fighting equipment, and evaluated the control of transient combustible materials. In addition, the inspectors verified fire protection related problems were entered into the corrective action program with the appropriate significance characterization.

These activities completed six quarterly fire protection - tour inspection samples.

b. Findings

No findings of significance were identified

1R06 Flood Protection (71111.06)

a. Inspection Scope

The inspectors performed an inspection related to the licensee's precautions to mitigate the risk from internal flooding events. The inspectors performed a walkdown of the following plant area to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable:

- Flood Doors and Barriers Inside Power Block.

The inspectors also reviewed the work activities associated with internal flooding to verify identified problems were being entered into the corrective action program with the appropriate characterization and significance.

These activities completed one internal flood protection inspection sample.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07A)

a. Inspection Scope

The inspectors reviewed completed test reports for emergency diesel generators (EDGs) 11, 12, 13, and 14 jacket coolant systems, lube oil, and air coolant system heat

exchangers. The inspectors selected these heat exchangers because their associated systems were risk significant in the licensee's risk assessment and were required to support the operability of other risk-significant, safety-related equipment. During these inspections, the inspectors reviewed applicable documents and procedures. In addition, the inspectors verified heat sink problems were entered into the corrective action program with the appropriate significance characterization and completed corrective actions were adequate and appropriately implemented.

These activities completed one heat sink performance inspection sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On February 8, 2007, the inspectors observed an operations support crew during the annual requalification examination in mitigating the consequences of events in Scenario SS-OP-904-1012, "Drywell Pressure Inst. Fails/RR Pump Fails/Small LOCA/Partial Failure of ECCS on the simulator." The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements.

These activities completed one quarterly licensed operator requalification inspection sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- Torus Hardened Vent; and
- Reactor Water Cleanup (RWCU) 'B' Pump Seal Failure.

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. Specifically, the inspectors independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b);
- characterizing system reliability issues;
- tracking system unavailability;
- trending key parameters (condition monitoring);
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification and/or re-classification; and
- verifying appropriate performance criteria for systems classified as (a)(2) and/or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization.

These activities completed two quarterly maintenance effectiveness inspection samples.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13Q)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and operational activities affecting risk-significant and safety-related equipment listed below:

- Division I RHR Safety System Outage during the week of January 21, 2007;
- EDG 12 Safety System Outage during the week of February 4, 2007;
- 72EC-2C Motor Control Center (MCC) Control Transformer Work during the week of February 4, 2007;
- Combustion Turbine Generator 11-1 trip, removal of the North Heater Drain Pump, and EDG 11 failure from service during the week of February 18, 2007; and
- RCIC Safety System Outage during the week of March 4, 2007.

These activities were selected based on their potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst and/or shift technical advisor, and verified plant conditions were

consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

These activities completed five quarterly maintenance risk assessment and emergent work control inspection samples.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following CARDs to ensure either the condition did not render the involved equipment inoperable or result in an unrecognized increase in plant risk, and the licensee appropriately applied TS limitations and appropriately returned the affected equipment to an operable status:

- CARD 06-27794, Mis-torqued High Pressure Coolant Injection (HPCI) Thermocouple Gasket;
- CARD 06-28124, Loose Flexible Conduit and Junction Box;
- CARD 06-27664, Automatic Voltage Regulator General Alarm;
- CARD 07-20658, Drywell Equipment Drain Sump; and
- CARD 07-21538, EDG Oil Leaks.

These activities completed five operability evaluations inspection samples.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A)

a. Inspection Scope

The following engineering design package was reviewed and selected aspects were discussed with engineering personnel:

- Work Request (WR) 000Z052900, RHR Pump ‘A’ Motor Replacement.

This document and related documentation were reviewed for adequacy of the safety evaluation, consideration of design parameters, implementation of the modification, post-modification testing, and relevant procedures, design, and licensing documents were properly updated. The modification was for equipment upgrades of existing equipment.

These activities completed one permanent plant modification inspection sample.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed post-maintenance testing (PMT) activities associated with the following scheduled maintenance:

- WR 000Z0600002, Control Room Annunciator Panel 601 and 602 Power Supply Replacement;
- 72EC-2C MCC Control Transformer Work;
- Division I Control Complex HVAC Emergency Makeup Fan;
- EDG 11 Twenty-Four Hour Run Following Maintenance; and
- RCIC Following Valve and Pump Seal Maintenance.

The inspectors reviewed the scope of the work performed and evaluated the adequacy of the specified PMT. The inspectors verified the PMT was performed in accordance with approved procedures, the procedures clearly stated acceptance criteria, and the acceptance criteria were met. The inspectors interviewed operations, maintenance, and engineering department personnel and reviewed the completed PMT documentation.

In addition, the inspectors verified PMT problems were entered into the corrective action program with the appropriate significance characterization.

These activities completed five PMT inspection samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- Procedure 24.139.02, Standby Liquid Control Operability Test;
- WR W419070100, Calibrate EDG 12 Service Water Flow Loop;
- WR 0304070131, Perform 24.307.35 Diesel Generator Service Water, Diesel Fuel Oil Tank, and Starting Air Operability Test;

- Procedure 24.000.02, Reactor Coolant System (RCS) Operational Leakage; and
- Procedure 24.202.01, HPCI Pump Time Response and Operability Test.

The inspectors reviewed the test methodology and test results to verify equipment performance was consistent with safety analysis and design basis assumptions. In addition, the inspectors verified surveillance testing problems were being entered into the corrective action program with the appropriate significance characterization.

These activities completed three routine surveillances, one RCS leak sample, and one in-service test inspection samples.

b. Findings

No findings of significance were identified.

1EP2 Alert and Notification System Evaluation (71114.02)

a. Inspection Scope

The inspectors reviewed and discussed with Emergency Preparedness (EP) staff records for the operation, maintenance and testing of the alert and notification system (ANS) for the Fermi 2 Plant Emergency Planning Zone to verify that the ANS equipment was adequately maintained and tested during 2005, 2006, and 2007 in accordance with emergency plan commitments and procedures. The inspectors reviewed records of 2005 and 2006 preventive maintenance performed on ANS equipment to verify that annual preventive maintenance was completed. Also, the inspectors reviewed samples of 2005, 2006, and 2007 non-scheduled maintenance activity records, to determine whether equipment trouble-shooting and repairs were completed in a timely manner. Additionally, the inspectors reviewed records of ANS tests conducted from May 2005 through February 2007, to determine if Fermi EP staff were effectively using the corrective action program to document, correct, and trend identified siren problems.

These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03)

a. Inspection Scope

The inspectors reviewed and discussed procedures on the primary and alternate processes of augmenting the on-shift emergency response organization (ERO). The inspectors also discussed the EP staff's process for maintaining the Fermi 2 Plant's ERO roster and ERO personnel's contact information. The inspectors reviewed records of unannounced off-hours augmentations of the on-shift ERO, which included call-in test results between June 2005 and January 2007, to determine the adequacy of ERO members' response and the use of the corrective action program for identified response

problems. The inspectors reviewed a sample of training records for 45 ERO members who were assigned to key and support positions to verify that they were currently trained for their assigned positions.

These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05)

a. Inspection Scope

The inspectors reviewed Nuclear Oversight Staff's (NOS) 2005 and 2006 audits of the licensee's EP program to verify that these independent assessments met the requirements of 10 CFR 50.54(t). The inspectors reviewed sample records of EP drills and exercises conducted during 2005 and 2006 to verify that these activities were adequately critiqued. Samples of corrective action program records and associated corrective actions were reviewed to determine if weaknesses and deficiencies identified in the following types of self-assessments were adequately addressed: critiques of EP drills and exercises; NOS 2005 and 2006 station EP audits; and Fermi Plant EP staff 2006 and 2007 self-assessments.

These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the licensee perform an EP drill on March 21, 2007. The inspectors observed activities in the control room simulator, technical support center, and emergency operations facility. The inspectors also attended the post-drill facility critiques in the technical support center and emergency operations facility immediately following the drill. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the drill performance and ensure the licensee evaluators noted the same weaknesses and deficiencies and entered them into the corrective action program. The inspectors placed emphasis on observations regarding event classification, notifications, protective action recommendations, and site evacuation and accountability activities. As part of the inspection, the inspectors reviewed the drill package included in the list of documents reviewed at the end of this report.

These activities completed one drill evaluation inspection sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed the Fermi Power Plant Unit 2 UFSAR to identify applicable radiation monitors associated with measuring transient high and very high radiation areas including those used in remote emergency assessment. The inspectors identified the types of portable radiation detection instrumentation used for job coverage of high radiation area work including instruments used for underwater surveys, fixed area radiation monitors used to provide radiological information in various plant areas, and continuous air monitors used to assess airborne radiological conditions and work areas with the potential for workers to receive a 50 millirem or greater committed effective dose equivalent. Contamination monitors, whole body counters and those radiation detection instruments utilized for the release of personnel, and equipment from the radiologically restricted area were also identified.

These activities completed two inspection samples.

b. Findings

No findings of significance were identified.

.2 Walkdowns of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors conducted walkdowns of selected area radiation monitors (ARMs) in the main control room, turbine, radioactive waste, and reactor buildings to verify they were located as described in the UFSAR and were optimally positioned relative to the potential source(s) of radiation they were intended to monitor and to verify that control room instrument readout and high alarm setpoints for those ARMs were consistent with UFSAR information and actual field conditions. Walkdowns were also conducted of those areas where portable survey instruments were calibrated/repaired and maintained for radiation protection staff use to determine if those instruments designated “ready for use” were sufficient in number to support the radiation protection program, had current calibration stickers, were operable, and were in good physical condition. Additionally, the inspectors observed the licensee’s instrument calibration units and the radiation sources used for instrument checks to assess their material condition and discussed

their use with RP staff to determine if they were used adequately. Licensee personnel were also observed performing source checks of selected instruments as they were logged-out for use.

These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

.3 Calibration and Testing of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors selectively reviewed radiological instrumentation associated with monitoring transient high and/or very high radiation areas, instruments used for remote emergency assessment and radiation monitors used to identify personnel contamination and for assessment of internal exposures to verify that the instruments had been calibrated as required by the licensee's procedures, consistent with industry and regulatory standards. The inspectors also reviewed alarm setpoints for selected ARMs to verify that they were established consistent with the UFSAR and TSs, as applicable. Specifically, the inspectors reviewed calibration procedures and the most recent calibration records and/or source characterization/output verification documents for the following radiation monitoring instrumentation and instrument calibration equipment:

- Containment High Range ARMs (both divisions);
- Main Control Room (Channel 6);
- Traversing In-Core Probe Room ARM (Channel 12);
- Refuel Floor ARMs (Channels 15 and 17);
- New Fuel Storage Vault (Channel 16);
- Small Articles Monitors used at plant egress points;
- J. L. Shepherd Instrument Calibrator;
- Portable survey instruments used for underwater surveys;
- Standup Whole Body Counter;
- Portal Monitors used at the Primary Access Portal; and
- Personnel Contamination Monitors used at the egress points.

The inspectors determined what actions were taken when, and during calibration or source checks, an instrument was found significantly out of calibration or exceeded as-found acceptance criteria. Should that occur, the inspectors verified that the licensee's actions would include a determination of the instrument's previous usages and the possible consequences of that use, since the prior calibration. The inspectors also reviewed the licensee's 10 CFR Part 61 source term information to determine if the calibration sources used were representative of the plant source term and that difficult to detect nuclides were scaled into whole body count dose determinations.

These activities completed one inspection sample.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of NRC requirements for the failure to maintain adequate procedures for the calibration of the containment high range ARMs (D11-K816 A and B).

Description: The containment high range ARMs are used to facilitate the evaluation of core damage in the event of a postulated accident and are also used as ARMs during plant operations, shutdown, and under accident conditions. The design, use, and maintenance of these monitors is described in the station UFSAR and the radiological emergency response preparedness plan.

The inspectors identified that in 2001 the licensee revised plant technical procedures for the calibration of the containment high range ARMs. That revision eliminated the requirement that the calibration of the containment high range ARMs be performed with a traceable, known source of radioactivity. Since that time, the 18-month calibration was reduced to an electronic calibration of the instrument with only a qualitative verification of detector response.

The inspectors concluded that the change to the licensee's procedure resulted in an incomplete calibration of the instrument which failed to provide assurance that the instrument would accurately respond. As further described in NUREG 0737, the calibration of the containment high range ARMs are to include a single point in-situ calibration that exposes the detectors to a known source of radiation in the range of 1 Rem/hr to 10 Rem/hr.

Prior to 1999, the licensee's TSs contained a requirement to perform a single point in-situ calibration and expose the containment high range radiation detectors to a known source of radiation in the range of 1 Rem/hr to 10 Rem/hr. However, the detail of this calibration requirement was deleted when the licensee transitioned to Improved Technical Specifications in accordance with license amendment 134, dated September 30, 1999. Although, the licensee indicated to the inspectors that no change in detector calibration protocol was intended with the implementation of Improved Technical Specifications, station procedures 62.120.040 and 62.120.041 for the calibration of the containment high range ARMs were changed in 2001. That change eliminated the requirement for a quantitative radiation check as a part of the instrument calibration.

Analysis: The failure to adequately maintain procedures for the calibration of the containment high range ARMs was determined to be a performance deficiency as defined in NRC Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening." Specifically, the inspectors determined that not calibrating the containment high range ARMs using radiation sources of known values was more than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Plant Facilities/Equipment and Instrumentation and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive materials during civilian nuclear reactor operation. Therefore, the issue was greater than minor and represented a finding which was evaluated using the Significance Determination Process (SDP).

Since the finding involved ARMs, the inspectors utilized IMC 0609, Appendix C, "Occupational Radiation Safety SDP," to assess its significance. The inspectors concluded that the issue did not involve as-low-as-is-reasonably-achievable planning or work controls, there was no overexposure or substantial potential for an overexposure to the worker, and the licensee's ability to assess dose was not compromised. Consequently, the inspectors concluded that the SDP assessment for the finding was of very low safety significance (Green).

The inspectors also reviewed the issue and determined that no cross-cutting aspects were identified in the areas of human performance, problem identification and resolution, or safety conscious work environment.

Enforcement: Technical Specification 5.4.1 requires that written procedures be established, implemented, and maintained for activities listed in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33 defines the quality assurance program requirements for nuclear power plants and Appendix A, Section 7, step f. specifies procedures for the ARMs. Contrary to the above, the licensee did not maintain adequate calibration procedures for the containment high range ARMs. Since 2001, Fermi Station procedures for the calibration of the containment high range ARMs did not include a quantitative response to a known source of radiation as a part of the instrument calibration which resulted in an incomplete calibration of the instrument. As an immediate correction action, the licensee performed an evaluation and determined that the monitor was functional based on its adequate response to ambient radiation levels. The licensee also planned to revise applicable procedures to perform the calibrations using appropriate radioactive sources. Since the licensee documented this issue in its corrective action program (CARD 07-21616), and because this finding is of very low safety significance, it is being treated as a Non-Cited Violation (NCV 05000341/2007002-01).

.4 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed licensee condition assessment resolution documents (CARDs) and any special reports that involved personnel contamination monitor alarms due to personnel internal exposures to verify that identified problems were entered into the corrective action program for resolution. Licensee audits and CARDs were also reviewed to verify that deficiencies and problems with radiological instrumentation, the radiation monitoring system or self-contained breathing apparatus (SCBA) were identified, characterized, prioritized, and resolved effectively using the corrective action program.

The inspectors reviewed corrective action program reports related to exposure significant radiological incidents that involved radiation monitoring instrument deficiencies since the last inspection in this area, as applicable. Members of the radiation protection staff were interviewed and corrective action documents were reviewed to verify that follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- Initial problem identification, characterization, and tracking;
- Disposition of operability/reportability issues;
- Evaluation of safety significance/risk and priority for resolution;
- Identification of repetitive problems;
- Identification of contributing causes; and
- Identification and implementation of effective corrective actions.

The inspectors determined if the licensee's self-assessment and/or audit activities were identifying and addressing repetitive deficiencies or significant individual deficiencies in problem identification and resolution.

These reviews represented three inspection samples.

b. Findings

No findings of significance were identified.

.5 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspectors selectively verified that calibrations for those instruments recently used and for those designated for use had not lapsed. The inspectors reviewed instrument logs to verify that response checks of portable survey instruments were completed prior to instrument use and upon return of the instrument to the storage area after use, as required by the licensee's procedure. The inspectors also discussed instrument calibration methods and source response check practices with radiation protection staff and observed staff complete instrument operability checks prior to use.

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

.6 Self-Contained Breathing Apparatus (SCBA) Maintenance/Inspection and User Training

a. Inspection Scope

The inspectors reviewed aspects of the licensee's respiratory protection program for compliance with the requirements of Subpart H of 10 CFR Part 20 and to determine if SCBA was properly maintained and ready for emergency use. The inspectors reviewed the status, maintenance, and surveillance records of SCBAs staged and ready-for-emergency use in various areas of the plant and assessed the licensee's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center (OSC) during emergency conditions. The inspectors verified that selected control room staff designated for the active on-shift duty roster, including those individuals on the station's fire brigade, were trained, respirator fit tested, and medically certified to use SCBAs. Additionally, the inspectors reviewed SCBA

qualifications for the emergency response organization's radiological emergency team to determine if a sufficient number of staff were qualified to fulfill emergency response positions to meet the requirements of 10 CFR 50.47. The inspectors also reviewed respiratory protection training lesson plans to assess their overall adequacy for compliance with Subpart H, and to verify that personal SCBA air bottle change-out was adequately covered.

The inspectors walked down the bottled air supply rack and spare air bottle stations located outside the main control room and inspected SCBA equipment maintained in the control room and SCBA equipment staged for emergency use in various areas of the plant. During the walkdowns, the inspectors examined several SCBA units to assess their material condition, to verify that air bottle hydrostatic tests were current, and to verify that bottles were pressurized to meet procedural requirements. The inspectors reviewed records of SCBA equipment inspection and functional testing and observed selected operations personnel inspect, don, doff, and use SCBA air packs to determine if these activities were performed consistent with procedure and the equipment manufacturers recommendations. The inspectors also ensured that the required, periodic air cylinder hydrostatic testing was documented and up to date, and that the Department of Transportation required retest air cylinder markings were in place for several randomly selected SCBA units. Additionally, the inspectors reviewed vendor training certificates for those individuals involved in the repair of SCBA pressure regulators to determine if those personnel that performed maintenance on components vital to equipment function were qualified. The most recent vital component (regulator) test records were reviewed by the inspectors for selected SCBA equipment currently designated for emergency use.

These reviews represented two inspection samples.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

4OA1 Performance Indicator Verification (71151)

.1 Reactor Safety Strategic Area

a. Inspection Scope

The inspectors sampled the licensee's submittals for the performance indicators (PIs) listed below. The inspectors used PI definitions and guidance contained in Revision 4 of Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," to verify the accuracy of the PI data. The following PIs were reviewed:

- Unplanned Scrams;
- Scrams with Loss of Normal Heat Removal;
- Unplanned Power Changes; and
- RCS Leakage.

The inspectors reviewed selected applicable conditions and data from logs, licensee event reports, and CARDs from January 2005 through January 2007, for each PI area specified above. The inspectors independently re-performed calculations where applicable. The inspectors compared that information to the information required for each PI definition in the guideline to ensure the licensee reported the data correctly.

These activities completed four performance indicator inspection samples.

b. Findings

No findings of significance were identified.

.2 Emergency Preparedness

a. Inspection Scope

The inspectors reviewed samples of licensee records associated with the three EP performance indicators listed below. Inspectors verified that the licensee accurately reported these indicators in accordance with relevant procedures and Nuclear Energy Institute guidance endorsed by the NRC. Specifically, the inspectors reviewed licensee records associated with PI data reported to the NRC for the period April 2006 through December 2006. Reviewed records included: procedural guidance on assessing opportunities for these three PIs; pre-designated Control Room Simulator training sessions, the 2006 biennial exercise, and integrated emergency response facility drills; revisions of the roster of personnel assigned to key ERO positions; and results of periodic ANS operability tests. The following PIs were reviewed:

- ANS;
- ERO Drill Participation; and
- Drill and Exercise Performance.

These activities completed three inspection samples.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's corrective action system at an appropriate threshold, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed.

b. Findings

No findings of significance were identified.

.2 Annual Sample: Review of Issues Relating to Human Performance

a. Inspection Scope

The inspectors reviewed issues relating to low level human performance during December 2006 and the first quarter of 2007. The inspectors reviewed CARDs 06-27827, 06-27974, 06-27681, 07-20378, 07-20490, 07-20510, 07-20519, and 07-20785.

b. Observations

Based on a review of the licensee CARDs, the inspectors noted an increase in the number of low level human performance issues that occurred during the last month of 2006 and the first quarter of 2007. An investigation of the CARDs associated with these issues revealed a variety of human performance incidents involving non safety-related equipment, including valve and switch mis-positions, maintenance performed on the wrong equipment, and significant rework on the south RWCU pump due to poor worker practices during the pump rebuild. As part of the licensee's corrective actions, the licensee integrated more human performance trending into the corrective action process. The licensee recognized that the disposition of the human performance trend evaluations had not been fully effective. The licensee used the February 2007 leadership briefing to increase plant worker awareness of the issue and completed a common cause analysis on the issue of human performance on March 28, 2007. The licensee plans to implement the corrective actions from the common cause during the second quarter of 2007.

These activities completed one inspection sample.

c. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

.1 RWCU 'B' Pump Seal Failure

a. Inspection Scope

On February 6, 2007, RWCU 'B' seal failure led to an isolation of the RWCU system. The inspectors observed the operators follow the abnormal operating procedures and depressurize the RWCU system to stop the leak. Operations verified that the leak was isolated and that the 'A' train of RWCU was intact. Following the verifications of system integrity, the inspectors observed the operators restore the RWCU system to operation using the 'A' train.

These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

.2 Inadequate Verification of Alternate Emergency Operations Facility Readiness

a. Inspection Scope

During the week of February 19, 2007, the licensee removed the normal emergency operations facility (EOF) from service for remodeling. On February 21, 2007, the inspectors drove to the alternate EOF (AEOF) to tour the facility for readiness.

These activities completed one inspection sample.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance (Green) for the failure to verify adequate compensatory actions were in place while the EOF was unavailable. The AEOF was modified such that activation of the facility would have been significantly delayed.

Description: The licensee started remodeling the EOF which rendered the EOF unavailable for five days beginning February 19, 2007. As a compensatory action, the licensee planned to use their AEOF for emergency response if required. The AEOF is a medium-sized multipurpose conference room. Inside the AEOF is a locked storage room with the required materials such as procedures, maps, dose assessment computer, etc.

On February 21, 2007, two days after the remodeling began, the inspectors informed the licensee of their desire to tour the AEOF to verify the readiness of the facility which is located in a Detroit Edison building approximately 25 miles from Fermi. A member of the Fermi ERO met the inspectors at the facility. Upon arrival, the inspectors and licensee representative discovered that locks had been installed on the doors to the conference room without the licensee's knowledge. The locks were installed several days previously to help secure computers in the room that were being used to test an upgrade to the

company's network. Only two keys were available, both of which were maintained by two administrative assistants who work during the day and are not on any relevant paging or call-out list.

The AEOF activation procedure stated that a key to the storage room is kept with the Regional System Supervisor, a position in the building staffed continually in the Regional Operations Center (ROC); however, Detroit Edison consolidated several months ago and moved this position to a location 25 miles away. Even after the consolidation, the ROC remained continuously locked behind key-carded doors. After 45 minutes, the inspectors and the licensee were able to locate one of the few individuals who could open the door and gain access to the ROC. A key to the storage room was also staged in the EOF, but licensee staff would have gone directly to the AEOF if responding from home during off hours. Further, radios the licensee would have relied on for offsite dose assessment teams were also located in the ROC.

Had the licensee needed to staff the AEOF during off-normal hours, these unforseen circumstances could have delayed the activation of the facility which could have adversely affected the ability of the licensee to protect the public in the event of an emergency. Consequently, the facility custodian disabled the locks, the licensee established a continuous watch at the AEOF, and corporate security authorized all EOF members access to the ROC.

The licensee did not physically verify the readiness of the AEOF prior to removing the EOF from service but rather verified that the last surveillance was satisfactorily completed. The licensee further concluded that the only controls in place to ensure the readiness of the room was via an informal verbal agreement with supervisory personnel in the building. As such, a formal "letter of agreement" between Fermi and Detroit Edison's Facilities and Asset Management was signed to ensure proper controls remained in place.

Analysis: The inspectors determined the failure to verify adequate compensatory measures were in place prior to removing the EOF from service was a performance deficiency warranting a significance determination. The inspectors determined the issue was more than minor because it was similar to an example question in IMC 0612, Appendix E, in that the AEOF and the procedures for activating the AEOF were in a condition that would have affected the licensee's response to an emergency. Using IMC 0609, Appendix B, “Emergency Preparedness Significance Determination Process” dated March 6, 2003, the inspectors determined this issue was of very low safety significance (Green) because the duration for which adequate compensatory measures were not in place while the EOF was not functional was less than seven days. (FIN 05000341/2007002-02).

Enforcement: The inspectors reviewed the requirements of 10 CFR 50, Appendix B, and 10 CFR 50.47 and determined this finding did not involve a violation of NRC requirements since neither the AEOF nor the EOF are safety-related and the issue did not involve either a degradation or the augmentation of the facility but rather the timeliness of activating the facility. The inspectors reviewed the licensee's Emergency Plan and determined that it did not require facility activation within any prescribed time limit. Therefore, all emergency planning standards were satisfied. This issue has been entered into the licensee's

corrective action program as CARD 07-21035. Once the issue was identified, the licensee ensured the locks were disabled and continuously staffed the AEOF with an EOF member until positive controls were in place to ensure continued availability of the AEOF.

4OA5 Other Activities

.1 (Closed) URI (05000341/2005016-01): Review of Fermi 2 licensing basis with regard to the mitigation of tornado effects.

During the previous inspection, the licensee was not able to provide an analysis or other documentation to demonstrate that the RHR complex and its enclosed components were capable of withstanding the depressurization effects that could occur if a tornado passed directly over the building. The inspectors postulated that if a tornado depressurization zone passed by the RHR complex, the outside air pressure would be higher than the reduced pressure inside the diesel generator rooms, thereby closing the gravity exhaust dampers. The inspectors postulated that this phenomenon could result in a maximum pressure differential of 3 psid between the normal outside atmospheric pressure and the reduced inside atmospheric pressure. This differential pressure could develop across both the ventilation system intake and exhaust dampers as well as across the building structural components such as the roof. The inspectors were concerned that the EDG support systems or the structure that enclosed the EDGs could, therefore, be damaged. This issue was considered an unresolved item (URI 05000341/2005016-01) pending further review of Fermi 2's licensing basis by the NRC.

The inspectors performed an initial review of NUREG-0798, “Safety Evaluation Report Related to the Operation of Enrico Fermi Atomic Power Plant, Docket No. 50-341,” dated July 1981. Section 3.2.2, “Tornado Design Criteria,” described NRR’s review of the Fermi 2 tornado design criteria. The document concluded that the design basis tornado and the procedures used for calculating loadings on structures met the applicable requirements of Regulatory Guide 1.76 and was acceptable. The document further stated that “the use of these procedures provides assurance that, in the event of a design basis tornado, the structural integrity of the plant structures that need to be designed for tornados will not be impaired and, in consequence, safety-related systems and components located within these structures will be adequately protected and may be expected to perform their necessary safety functions as required.” The inspectors could not determine if this safety evaluation report considered the issue described above since it did not appear to address re-pressurization effects. The inspectors also noted that Regulatory Guide 1.76 described the design basis tornado, but it did not discuss the structural design requirements for tornado protection.

The issue was discussed with NRR personnel and it was determined that licensees were not specifically required to analyze the structural integrity of the HVAC systems, or other internal systems, in Category I structures to withstand tornado depressurization effects. However, in NRC Regulatory Issue Summary (RIS) 2006-23, “Post-Tornado Operability of Ventilating and Air-Conditioning Systems Housed in Emergency Diesel Generator Rooms” dated December 6, 2006, the NRC staff concluded that licensees may not have adequately considered tornado wind and pressure-drop effects on safety-related systems and components inside building structures open to the outside environment. The RIS further documented that licensees should take any necessary measures to ensure the operability of ventilation and air conditioning duct systems located in EDG rooms.

The inspectors conducted a walkdown of Fermi 2 RHR/EDG complex, reviewed various plant documents, engaged in discussions with several plant personnel and made the following qualitative assessment:

- During a tornado (depressurization outside), the roof mounted EDG/RHR and switchgear room HVAC exhaust dampers (all of which are missile protected) will open to equalize the pressure, so no differential pressure (dp) will exist between the inside and outside of the EDG/RHR building.

- After a tornado passes the building (re-pressurization outside), the EDG/RHR and switchgear room HVAC intake dampers will each allow in-leakage of approximately 300 cubic feet per minute of air through existing openings (under fully closed position), thereby reducing the postulated 3 psi dp between inside and outside the buildings considerably and equalizing the pressure relatively quickly.

- All the essential switchgear, EDG control panels, and MCC are sufficiently vented, which eliminated the differential pressure concerns expressed in the URI.

- The roof slab had sufficient design margin to withstand the effects of a tornado.

- The two offsite power sources/switchyard available at Fermi 2 are geographically separated (one located at the south side and the other at the west side of the plant), which considerably reduces the probability of a tornado causing complete loss of offsite power at Fermi 2.

- The EDG combustion air intake and exhaust are unaffected by the depressurization and re-pressurization effects of a tornado based on their location and the fact that they are well shielded from tornado borne missiles.

- The only component that may malfunction/damage during re-pressurization after a tornado is the EDG/RHR room ventilation exhaust gravity damper mounted on the roof. Damage to this damper does not affect the immediate operability of the EDGs, RHR service water and EDG service water pumps. This will only affect the room heat up rate. Operator actions in response to the EDG room temperature alarms (in the control room) are expected to restore EDG/RHR room HVAC systems in a timely manner.

The inspectors also reviewed the applicability review of this RIS conducted by the licensee and documented in an attachment to CARD 05-26492. The inspectors concluded that the applicability review performed by the licensee was adequate as it was based on the similar qualitative assessment/arguments as described above. Therefore, the inspectors determined no performance deficiencies or violations of regulatory requirements occurred and no additional enforcement action was warranted. The inspectors had no further concerns in this area. This unresolved item is closed.

.2 (Closed) URI (05000341/2005016-02): Review of Fermi 2 licensing basis with regard to the potential release path via the condensate storage tank (CST) following the loss of coolant accident (LOCA)

During the 2005 Safety System Design and Performance Capability inspection, the inspectors identified an unresolved item concerning a potential radioactive release path via the CST following a LOCA. While in standby, the RCIC system is normally aligned to the CST through a check valve E5150F011 (F011) and normally open motor operated valve (MOV) E5150F010 (F010). When the level in the CST decreases to a predetermined setpoint or when the level in the suppression pool increases to a predetermined setpoint, the suction path switches to the suppression pool as the normally closed MOVs E5150F029 (F029) and E5150F031 (F031) open and MOV F010 closes.

The HPCI system functions in a similar manner with CST suction check valve E4150F019 (F019) and normally open MOV E4150F004 (F004) and the suppression pool suction valves, normally closed MOVs E4150F041 (F041) and E4150F042 (F042).

The inspectors were concerned that the licensee did not leak test the CST suction or the suppression pool suction valves. The inspectors postulated that following a design basis LOCA and a range of intermediate break LOCAs, the pressure differential between the suppression pool and CST could cause potentially contaminated, radioactive water to be transferred from the suppression pool to the CST through the MOVs and check valves. As the CST is vented, this could result in a radioactive release outside of the current 10 CFR 100 and General Design Criteria 19 requirements.

The licensee documented this issue as CARD 05-26699. The licensee believed that the secondary containment bypass leakage postulated in the above scenario was not part of plant design and licensing basis. The licensee based this position in part on the response to the Three Mile Island (TMI) Question H.III.1.1.1, which stated that the CST was identified as isolated from highly contaminated systems. The licensee also stated that the plant design and licensing basis assumed emergency core cooling system liquid leakage occurred within the secondary containment boundary and was limited to a rate of 5 gallons per minute. Furthermore, UFSAR Section 6.2.1.2.2.3 identified that the HPCI and RCIC CST suction lines were excluded as bypass leakage paths on the basis that they were sealed with water. The inspectors concluded that the CST would be isolated from contaminated sources if the valves in question were shown to be leak-tight. Because this has not been demonstrated, the inspectors believed the licensee may not be meeting their licensing and design basis.

NRC Review and Conclusion:

During this followup inspection, the inspectors reviewed several licensee documents including UFSAR sections and tables; inservice testing requirements and documents; and HPCI and RCIC Design Basis Documents. The inspectors also consulted NRR personnel and reviewed two related task interface agreement responses at Susquehanna (TAC# M86276) and H.B Robinson (TIA 94-22) plants. The inspectors determined that with respect to licensing or post-TMI license conditions, valves which isolate potential pathways were not considered containment isolation valves subject to local leak rate testing. Also, the source terms in the licensing basis for plants do not assume water leakage as a contributor to off-site doses. Therefore, the inspectors determined that the licensee was not required to leak test the valves in question.

The inspectors reviewed the licensee's actions in response to CARDs 05-26699 and 05-26676. The licensee implemented the following actions:

- Revised maintenance practices by requiring periodic disassembly and inspection of the HPCI check valve (F019) in the CST suction line. The first disassembly and inspection was satisfactorily completed during a recent refueling outage.

- Revised the inservice testing program to include stroke testing of the RCIC CST suction line valve F010. In addition, the licensee planned to perform a reverse leak test on the RCIC check valve F011 which was already subjected to routine preventive maintenance disassembly and inservice inspection.

- Revised the inservice testing program to include periodic stroke testing RCIC MOVs F029 and F010. The initial baseline stroke-time testing was completed in February 2006.

The inspectors generally agreed with the licensee's disposition that under all scenarios, after considering single failures, at least one safety-related valve would be functional as a barrier. In some scenarios, peak accident conditions would result in sufficient torus pressure to lift emergency core cooling system water to the CST via the suction lines. The emergency operating procedures would direct the operators to initiate the torus sprays early in the event, thus the period of time during which torus pressure would be sufficient to push water toward the CST is expected to be very short, about one day. Because of the large volume of piping between the CST and the CST swap isolation valves and typical valve leak rates, the inspectors determined that it would take many days to fill the HPCI and RCIC CST suction lines.

The inspectors determined no performance deficiencies or violations of regulatory requirements were identified and no additional enforcement action was warranted. The inspectors had no further concerns in this area. This unresolved item is closed.

4OA6 Exit Meetings

.1 Exit Meeting Summary

On April 5, 2007, the inspectors presented the inspection results to Mr. J. Davis and other members of licensee management at the conclusion of the inspection. The inspectors asked the licensee whether any material examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

The following interim exit meetings were conducted for:

- Emergency Preparedness inspection with Mr. D. Gipson on March 9, 2007;
- Occupational radiation safety program for radiation monitoring instrumentation and protective equipment with Messrs. D. Cobb and K. Hlavaty on March 23, 2007.

4OA7 Licensee-Identified Violations

No findings of significance were identified.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Davis, Senior Vice President and Chief Nuclear Officer
D. Gibson, Executive Vice President and Chief Nuclear Officer
D. Cobb, Assistant Vice President Nuclear Generation
K. Hlavaty, Plant Manager
B. Bertossi, Radiation Protection
K. Burke, Supervisor, Performance Engineering
R. Gaston, Manager, Nuclear Licensing
D. Harman, Radiation Protection
A. Hassoun, Principal Licensing Engineer
D. Kusumawati, Engineer, Nuclear Licensing
R. Libra, Director Nuclear Engineering
K. Morris, Emergency Preparedness Supervisor
D. Noetzel, Manager Nuclear System Engineering
B. O'Donnell, Manager, Performance Engineering
M. Philippon, Operations Manager
G. Piccard, Manager, Radiation Protection
J. Plona, Director, Nuclear Engineering
J. Priest, Radiation Protection Supervisor
T. VanderMay, Radiation Protection

NRC

C. Lipa, Chief, Division of Reactor Projects, Branch 4
S. Orth, Leader, Division of Reactor Safety, Plant Support Team
K. Riemer, Chief, Division of Reactor Safety, Plant Support Branch
A. Stone, Division of Reactor Safety, Branch 2

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000341/2007002-01	NCV	Failure to Perform a Complete Calibration of the Containment High Range Area Radiation Monitor
05000341/2007002-02	FIN	Inadequate Verification of Alternate Emergency Operations Facility Readiness

Closed

05000341/2005016-01	URI	Review of Fermi 2 licensing basis with regard to the mitigation of tornado effects.
05000341/2005016-02	URI	Review of Fermi 2 licensing basis with regard to the potential release path via the condensate storage tank following the loss of coolant accident.

Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

Section 1R01: Adverse Weather Protection

2007 Cold Weather Preparations

Section 1R04: Equipment Alignment

CARD 06-22125; Broken Electrical Flex Conduit; dated 04/10/2006
CARD 06-22590; NRC Identified Concern With Div. I Core Spray and Defense In Depth; dated 04/21/2006
CARD 06-22911; Packing Leak On E2100-F007A; dated 04/28/2006
CARD 06-22912; Packing Leak On E2100-F006B; dated 04/28/2006
CARD 06-23366; Core Spray Pump Motors Oil Cooler Sealing Baffle Additions; dated 05/15/2006
CARD 07-21458; Failed PMT due to excessive deadband in RCIC turbine oil filter switch; dated 03/13/2007
Drawing 6M721-2034; Diagram Core Spray System Reactor Building; dated 10/21/05
Drawing 6M721-5707; Core Spray System Functional Operating Sketch; dated 10/21/05
Drawing 6M721-5709-1; Reactor Core Isolation Cooling System Functional Operating Sketch; dated 05/18/2006
Drawing 6M721-5706-1; Residual Heat Removal Division II System Functional Operating Sketch; dated 03/05/2004
Drawing 6M721-5706-3; Residual Heat Removal Service Water Make Up Decant and Overflow Systems Functional Operating Sketch; dated 06/30/2006
Job ID 0175061006; Perform 24.203.03 Sec-5.1 CSS Pump And Valve Operability Test; dated 10/06/2006
Procedure 23.203; Core Spray System; Revision 40
Procedure 24.203.03; Division 2 CSS Pump and Valve Operability, and Automatic Actuation; Revision 45
Procedure 23.206; Reactor Core Isolation Cooling System; Revision 86
Procedure 23.205; Residual Heat Removal System; Revision 98
Procedure 23.208; RHR Complex Service Water Systems; Revision 85
ST-ES-339-0028-001; Core Spray System E2100; Revision 2

Section 1R05Q: Fire Protection

UFSAR Figure 9A-4; Fire Protection Evaluation Reactor and Auxiliary Buildings First Floor Plan; Revision 14, dated 11/06

Section 1R06: Flood Protection Measures

ARP 2D105; Reactor Building Corner Rooms/ HPCI Room Flood Level; Revision 13
ARP 2D78; Reactor Building Floor/Equipment Drain Sumps Level Hi-Hi/Lo-Lo; Revision 14
Drawing 6M721-2032; Sump Pump Diagram Radwaste System; Revision AY
Drawing 6M721-5710-2; Sump Pumps System Functional Operating Sketch; Revision AA

Procedure 47.000.84; Local Leakage Rate Testing For Equipment and Floor Drain Check Valves - G1101-F1407; dated April 22, 2006
Surveillance Scheduling and Tracking; Perform 47.000.84 Sec 6.4 LLRT for Floor Drain Check Valves - G1101F1407 and 1408; dated April 14, 2006
Surveillance Scheduling and Tracking; Perform 47.000.04 Sec 6.4 LLRT for Equipment Drain Check Valves G1101F1410 & 1411; dated April 25, 2006
Performance Evaluation Procedure 27.702.01; Reactor Building Sump Cross-tie Flood Control Valve Test; Revision 6
UFSAR 9.3.3; Plant Equipment and Floor Drains
UFSAR 2.4; Hydrologic Engineering
UFSAR 3.4; Water Level (Flood) Design

Section 1R07: Heat Sink Performance
ST-OP-315-0065-001; Emergency Diesel Generator R3000; Revision 17
WR 836060100; Perform 18-Month Visual PM On EDG 11 JCS, LO, ACS Heat Exchangers; dated 10/24/05
WR 840060100; Perform 18-Month Visual PM On EDG 12 JCS, LO, ACS Heat Exchangers; dated 01/30/06
WR 848060100; Perform 18-Month Visual PM On EDG 13 JCS, LO, ACS Heat Exchangers; dated 10/03/06
WR 844060100; Perform 18-Month Visual PM On EDG 14 JCS, LO, ACS Heat Exchangers; dated 11/17/06

Section 1R11: Licensed Operator Requalification
Evaluation Scenario SS-OP-904-1012; Drywell Pressure Inst. Fails/RR Pump Fails/Small LOCA/Partial Failure of ECCS
Procedure 27.000.04; Freeze Protection Lineup Verification; Revision 32
Procedure 27.000.06; Hot Weather Operations; Revision 0
Procedure 27.000.07; Cold Weather Operations; Revision 0
WR WST 940552; dated 02/13/07

Section 1R12: Maintenance Effectiveness
Surveillance Performance Procedure 47.000.84; Local Leakage Rate for Equipment
Surveillance Performance Procedure 47.000.84; Sec 6.2, LLRT for Equip DRN CK VLV's - G1101F1410 and 1411; dated 04/25/2006

Section 1R13: Maintenance Risk Assessment and Emergent Work Evaluation
CDF Risk Profile for the weeks of 1/29 to 2/5 and 2/5 to 2/12
CDF Risk Profile for the week of 3/5 to 3/12
EDG 11 JC Expansion Tank Inleakage 000Z070576; dated 02/26/2007
LERF Risk Profile for the weeks of 1/29 to 2/5 and 2/5 to 2/12
LERF Risk Profile for the week of 3/5 to 3/12
Scheduler's Evaluation for Fermi 2; dated 03/03/2007
Surveillance Performance Form 10/27/2006; Perform 42.302.07 Div 1 Bus 64B 4160V
Workweek Risk for Week of 02/26/2007

Section 1R15: Operability Evaluations

CARD 06-27664; AVR General Alarm; dated 12/03/2006
CARD 06-27794; Missed Torque and Gasket Replacement on Thermocouple Terminal Cover; dated 12/08/2006
CARD 06-27794-02; Operability of TC; dated 01/11/2007
CARD 07-21421; 4D53 AVR General Alarm received on 3/11/2007; dated 03/12/2007
ODMI-06-009; AVR General Alarm; Revision 2, dated 12/21/2006
ODMI 07-002; DW ED Sump Temp Increase Limitations, Revision 1, dated 03/26/2007

Section 1R19: Post-Maintenance Testing

CARD 06-25497; Tech Spec Value for EDG Minimum Voltage is Lower Than Tech Spec Value for Division I Degraded Grid Voltage; dated 08/25/2006
CARD 07-21265; RCIC Pump Outboard Seal Leak; dated 03/04/2007
LCO Number 2006-0485; R3000 Division I EDGs TS Value for Minimum Voltage is Lower Than TS Value for Division I Degraded Grid Voltage; dated 08/25/2006
Procedure 24.206.01; RCIC System Pump and Valve Operability Test; Revision 65
Procedure 24.307.16; Emergency Diesel Generator 13 - Start and Load Test; Revision 46
SST Event 0098; Perform 24.307.15 Sec 5.1 EDG 12 Start and Load Test - Slow Start
SST Event 0291; Perform 24.307.15 Sec 5.2 EDG 12 Start and Load Test - Fast Start
SST Event 0299; Perform 24.307.31 EDG 12 24-Hour Run Followed by Hot Fast Restart
Surveillance Performance; Procedure 24.307.14 Sec 5.1 EDG 11 Start and Load Test - Slow Start; dated 11/29/2006
Surveillance Performance; Procedure 24.307.14 Sec 5.2 EDG 11 Start and Load Test - Fast Start; dated 10/26/2006
Surveillance Performance; Procedure 24.307.15, Sec 5.1 EDG 12 Start and Load Test - Slow Start; dated 02/03/2007
Surveillance Performance; Perform 24.307.15 Sec 5.2 EDG 12 Start and Load Test - Fast Start; dated 11/02/2006
Surveillance Performance; Perform 24.307.15 Sec 5.1 EDG 12 Start and Load Test - Slow Start; dated 12/02/2006
Surveillance Performance; Procedure 29.307.30, EDG 11 24 Hour Run Followed by Hot Fast Restarts; dated 02/27/2007
WR A417060100; Inspect and Test Contractor and Circuit Devices for R1600S048; dated 02/05/2007
WR 000Z063138; Loose Knife Switch at its Pivot Connection; dated 02/05/2007
WR 000Z061708; Replace New Fuse Block that was Damaged During Fuse Installation; dated 02/05/2007
WR 000Z063204; Replace Control Transformer X4103C005, MCC 72EC-2C, Pos 3C; dated 02/05/2007
WR 000Z063025; Replace Control Transformer X4103C006; dated 02/05/2007
WR 000Z070642; RCIC Pump Outboard Seal Leak; dated 03/07/2007

Section 1EP2: Alert and Notification System (ANS) Evaluation

EP-560; Alert Notification System - Siren Operation and Maintenance; Revision 0
Monroe County Emergency Management Plan; Annex B; Appendix 1; Attachment D; Special Notification Procedures; Revision 12
ANS Siren Malfunctions and Incongruities Summary Sheets; dated May 5, 2005, through February 28, 2007

Letter From FEMA Region V; Approval of Fermi 2 Power Plant Proposed Public Alert and Notification System Replacement; dated January 21, 2003
CARD 06-26021; ANS Communication Failure from the Monroe County Dispatch Control Station; dated September 18, 2006
Siren Test Results Records; dated May 25, 2005, through February 28, 2007
CARD 06-24334; Alert and Notification System Siren Number 27 Failed Monthly Test; dated June 28, 2006
CARD 06-22806; Alert and Notification System Siren Number 49 Displaying COMM FAILURE; dated April 26, 2006
CARD 06-20370; Alert and Notification System Siren Number 49 Displaying COMM FAILURE; dated January 26, 2006
CARD 05-26088; ANS Traffic Damaged Siren Number 59; dated October 31, 2005
CARD 05-24258; ANS Traffic Accident Damaged Siren Number 2; dated July 18, 2005

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Radiological Emergency Response Plan, Table B-1; Staffing For Fermi 2 Emergency Response Organization; Revision 31
EP-290; Emergency Notifications; Revision 45
EP-292; Emergency Call Out - Backup Method; Revision 28
EP-570; Emergency Call Out System - Testing and Maintenance; Revision 0
QP-ER-665, Enclosure A; ERO Training Courses and Training Matrix; Revision 27
Fermi 2 ERO Team List; dated March 2, 2007
ECOS Test Revision Results; dated June 16, 2005, through January 19, 2007
CARD 07-21001; NRC Pre-Inspection Self-Assessment - Develop ECOS Training; dated February 20, 2007
CARD 07-20770; NRC Pre-Inspection Self-Assessment - Backup Augmentation System Testing Evaluation; dated February 8, 2007
CARD 07-20609; Operating Experience - Drive In Augmentation Drill Identifies Opportunities for Improvement (Dresden); February 1, 2007
CARD 06-27763; November 29, 2006, ECOS Phone Response Only Test Augmentation Weakness; dated December 7, 2006
CARD 06-26033; September 16, 2006, ECOS Phone Response Only Test Several Program and Augmentation Weaknesses; dated September 18, 2006
CARD 06-21931; EP-220 Does Not Reflect RERP Plan RP Technician Augmentation; dated April 5, 2006

Section 1EP5: Correction of Emergency Preparedness Weaknesses

Audit Report 06-0102; Quality Assurance Audit of the Emergency Preparedness Program; dated March 21,
Audit Report 05-0109; Quality Assurance Audit of the Radiological Emergency Response Preparedness Plan; dated June 28, 2005
NARP-07-0018; Focused Self-Assessment - NRC Emergency Preparedness Inspection Readiness; dated March 1, 2007
NARP-07-0013; Quick Hit Self-Assessment for Emergency Preparedness; dated January 24, 2007
NARP-06-0164; July 31, 2006 Unusual Event Declaration; dated August 10, 2006
NARP-05-0058; Quick Hit Self-Assessment - Emergency Preparedness Performance Indicators Comparison to Industry; dated May 12, 2005

Drill and Exercise Critique Summary; dated August 9, 2006
Drill and Exercise Critique Summary; dated May 23, 2006
Drill and Exercise Critique Summary; dated June 8, 2005
CARD 06-23630; RERP Drill May 23, 2006 - Failed Objective Due to Incorrect Protective Action Recommendation; dated May 26, 2006
CARD 06-20860; Audit Finding - Two ERO Staff Augmentation Positions Are Not Included As Timed Response Positions During ECOS Tests or ERO Drills and Exercises; dated February 17, 2006
CARD 06-20316; RERP Drill January 18, 2006 - Failure of Objective for Initial Notifications; dated January 24, 2006
CARD 05-25032; RERP Drill August 24, 2005, Inaccuracy On An Initial Notification Results In Failed Drill Objective; dated August 31, 2005
CARD 05-23505; RERP Program Recommendations of ECOS; dated June 9, 2005
CARD 05-23504; Audit Finding - Two RERP Assembly and Accountability Procedures Are Not Consistent With the RERP Plan; dated June 9, 2005
CARD 05-23009; NRC Violation, Change to Emergency Preparedness Program That Decreased the Effectiveness Without Prior NRC Approval; May 12, 2005

Section 1EP6: Drill Evaluation
RERP Drill Package, Scenario 42; March 21, 2007
Drill/Exercise Critique Summary, Scenario 42; March 21, 2007

2OS3 Radiation Monitoring Instrumentation and Protective Equipment
Fermi 2 Radiological Emergency Response Preparedness Plan; Revision 31
Fermi 2 Technical Requirements Manual; Revision 83
Fermi 2 TSs; TS Bases and License Amendments 134 and 159
Fermi 2 Updated Final Safety Analysis Report; Chapters 11 and 12; Multiple Revisions
Fermi 2 Radiation Protection Instrument Daily and Weekly Check Lists; various dates 2006 and 2007
Plant Technical Procedure 64.080.301; Area Radiation Monitoring System Channel Functional Test; Revision 31
Plant Technical Procedure 64.080.302; Area Radiation Monitoring System Channel 6 Calibration; Revision 10
Plant Technical Procedure 64.080.303; Area Radiation Monitoring System Channel 15 Calibration; Revision 10
Plant Technical Procedure 64.080.304; Area Radiation Monitoring System Channel 16 Calibration; Revision 10
Plant Technical Procedure 64.080.305; Area Radiation Monitoring System Channel 17 Calibration; Revision 09
Plant Technical Procedure 64.611.504; Area Radiation Monitoring System Channels 1-5, 7-14 and 18-48 Calibration/Functional Test; Revision 14
Plant Technical Procedure 65.000.228; Operation of the Radiation Protection Out-of-Service Program; Revision 5
Plant Technical Procedure 66.000.242; Calibration of NNC Gamma 60 Portal Monitor; Revision 3
Plant Technical Procedure 66.000.247; Calibration Records of IPM9D Monitor Nos. 299 and 303; dated September 2006; and Procedure Revisions 2 and 3
Plant Technical Procedure 66.000.304; Verification of Gamma Calibrator Dose Rates; Revision 6
Plant Technical Procedure 66.000.245; Calibration of the NE Small Articles Monitor; Revision 3

System Health Reports; Process and Area Radiation Monitoring; dated 2005 and 2006
NNC Calibration Data Forms; Instrument Nos. 960060 and 970265; dated October 5 and 6, 2006, respectively
Dositec AR-20 Calibration Form; Instrument No. 30245; dated September 09, 2005
AMP-100 Calibration Forms; Instrument Nos. 5001-050 and 5002-077; dated April 26, 2005, and October 10, 2005, respectively
AMS-4 Calibration Forms; Instrument Nos. 439, 439, 1939 and 1940; dated May 2005, November 2006, June 2005, and September 2006, respectively
IPM9D Calibration Forms; Instrument Nos. 298; dated May 13, 2005
Plant Technical Procedures 64.120.040 and 64.120.041; Containment Area High Range Radiation Monitor Division I and Division II Calibration Data; dated April 2000 and February 2006 and associated procedure Revision 10 and 14
Radcal Corporation Calibration Report; Model 2025AC Radiation Monitor (No. 4007) with Model 20X5-3 (No. 21135), Model 20X5-180 (No. 7498), and Model 20X5-1800 (No. 9959) Ion Chambers; dated July 2005 and May 2006
SAM-11 Calibration Forms; Instrument Nos. 310 and 311; dated October 2, 2006
ABACOS Helgeson Standup Counting System Calibration Records; dated November 2005 and November 2006
Scaling Factor Report and Associated Analysis Results; dated October 2005 and February 2007
CARD 05-21929; OE - Perry - Area Radiation Monitor Low Level Set Point Too High to Effectively Notify of Radiation Level Changes; dated March 23, 2005
CARD 06-22272; Frisker Failed Source Check; dated April 12, 2006
CARD 06-24942; RP Program Enhancement - Drywell Initial Entry; dated July 31, 2006
CARD 07-20068; ARM Alarm During Pumping of Waste Collector Tank; dated January 05, 2007
CARD 07-20118; Evaluate Trend of Area Radiation Area Alarm Occurrences for Commonalities; dated January 09, 2007
CARD 07-21616; NRC Concern Regarding CHRRMS Calibration; dated March 22, 2007
Nuclear Quality Assurance Audit Report 05-0113; dated November 11, 2005
Fermi 2 General Administration Conduct Manual MGA13 - Fermi Medical Requirements; Revision 13
Fermi 2 Radiological Emergency Team Rosters Matrix; dated March 2007
Fermi 2 Respiratory Protection Qualification Matrix; dated March 2007
Self-Contained Breathing Apparatus Maintenance and Inspection Logs; selected dates June 2005 - March 2007
Self-Contained Breathing Apparatus Inventory; dated March 22, 2007
Plant Technical Procedure 65.000.707; Inspection of MSA Respiratory Equipment; Revision 10
Plant Technical Procedure 65.000.736; Operation of The Breathing Air Compressors; Revision 7
Lesson Plan No. LP-GN-509-0100; Respiratory Protection - Airborne Area Work Controls and Devices; Revision 5
Lesson Plan No. LP-GN-509-0200; Respiratory Protection - Self-Contained Breathing Apparatus; Revision 2
Lesson Plan No. LP-GN-509-0300; Respiratory Protection - Self-Contained Breathing Apparatus and Emergency Breathing Air; Revision 4
Mine Safety Appliance Certificates for Select Members of the Radiation Protection Staff; February 2006

Section 4OA1: Performance Indicator Verification (71151)
CARD 07-20658; Temperature Increase in the DW Equipment Sump; dated 02/03/2007
CARD 07-20659; DW Equipment Sump Temperature Indicating Higher Than Expected in the MCR; dated 02/03/2007

CARD 07-20662; Suspect Valve Not Fully Closing on Demand from Recirculation; dated 02/04/2007
CARD 07-20708; G1154-F018, DW Equip Drn Sump Inbd Cntm Iso Vlv, Thermal Overload Trip; dated 02/06/2007
Drawing 6I721-2251-3; R/W Sys-Drywell Equipment Drain Sump 71 Pump GI101-C006A; Revision N, dated 09/23/92
Drawing 6I721-2251-40; R/W Sys Drywell Equip Drain Sump Recirc & Disch Valves G1154F015 and F018; Revision Y, dated 03/03/03
Drawing 6I721-2255-10; Radwaste System Instrument Loop Part 4
Drywell Equipment Drain Sump Temperature 02/04-19/2007; Revision V, 05/03/2006
EP-540; Drills and Exercises; Revision 26
EP-540, Enclosure E; NRC Performance Indicators - Radiological Emergency Response Plan; dated February 22, 2006
Records of DEP Indicator Opportunities; dated April 2006 through December 2006
Records of Key ERO Drill and Exercise Participation; dated April 2006 through December 2006
Records of ANS Siren Test Results; dated April 2006 through December 2006

Section 4OA2: Identification and Resolution of Problems (71152)
CARD 07-20510; Maintenance Performed on Wrong Equipment; dated 01/29/2007
CARD 07-20590; Common Cause Analysis on Select CARDs; dated 01/13/2007
CARD 07-20695; Supplemental Personnel Working on Equipment Without Proper Protection Order; dated 02/05/2007
CARD 07-20781; Unplanned Entry into TS 3.8.7; dated 02/08/2007
CARD 07-20785; Valves Found Out of Position During Panel Walkdown; dated 02/12/2007
CARD 07-20857; Perform a Common Cause Analysis on Station “Work Quality”; dated 02/13/2007
CARD 07-20927; Failure to Process an LCR for Emergency Operations Facility Upgrade; dated 02/16/2007
CARD 07-21069; Communication Upgrade Notification; dated 02/23/2007
CARD 07-21083; Lack of Engineering Evaluation Prior to Commencing Modification of the EOD Facility; dated 02/23/2007
CARD 07-21174; P&ID —2223 Configuration Control Issue; dated 02/28/2007
CARD 07-21196; Work Request Released and Working Without Adequate Protection; dated 02/28/2007
CARD 07-21519; Adverse Performance Trend Identified in Maintenance; dated 03/15/2007
CARD 07-21652; Missed Replacement of Relay, Caused Performance of Surveillance Two Extra Times; dated 03/23/2007
Common Cause Analysis Report for CARD 07-20590; dated March 28, 2007
Fermi 2 Station Quarterly Trend Report, 4th Quarter (October thru December) 2006
Leader Brief by Kevin Hlavaty; dated 02/07/2007
Licensing Change Request DSN; MLS08001; Reflect the change to the Emergency Operations Facility (EOF) Floor Plan; Revision 9, dated 02/23/2007
MEMO NANT-07, 01/22/2007; December Performance Trending Results; dated 01/22/2007
MLS14; Changes, Tests and Experiments; Revision 6
MLS Appendix B; Applicability Determination Manual; Revision 8
MLS14002; 50.59 Screen; Revision 5
MLS14003; 50.59 Evaluation; Revision 2
Root Cause Determination for CARD 07-20510; Maintenance Performed on Wrong Equipment; dated 02/16/2007

Section 4OA5: Other Activities (71153)
CARD 07-20733; Failed Seal on South RWCU Recirc Pump B; dated 02/06/2007
CARD 07-21198; PMT Failure - Abnormal Noise and Subsequent S/D of South RWCU Pump; dated 02/28/2007
Operator Log; 02/06/2007 to 02/08/2007
Revised CDF Risk Profile for the Week of 2/26 to 3/5
Risk Management Plan; RWCU Leak Identification, Isolation, and System Restoration; dated 02/06/2007
Troubleshooting Data Sheet, CARD 07-20733, G3303C001B, South RWCU Pump

LIST OF ACRONYMS USED

ADAMS	Agency wide Documents Access and Management System
ANS	Alert and Notification System
ARM	Area Radiation Monitor
CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
CST	Condensate Storage Tank
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
ECOS	Emergency Call Out System
EDG	Emergency Diesel Generator
EOF	Emergency Operations Facility
AEOF	Alternate Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
HPCI	High Pressure Coolant Injection
HVAC	Heating, Ventilation, and Air Conditioning
IMC	Inspection Manual Chapter
LER	Licensee Event Report
MCC	Motor Control Center
MOV	Motor Operated Valve
NOS	Nuclear Oversight Staff
NCV	Non Cited Violation
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
PARS	Public Availability Record
PI	Performance Indicator
PMT	Post-Maintenance Testing
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
RERP	Radiological Emergency Response Preparedness
RHR	Residual Heat Removal
RIS	Regulatory Information Summary
ROC	Regional Operations Center
RP	Radiation Protection
RWCU	Reactor Water Cleanup
SAM	Small Articles Monitor
SDP	Significance Determination Process
TMI	Three Mile Island
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
WR	Work Request